



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

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San Francisco, CA 94105-3901

Ms. Patti Clinton
Bureau of Reclamation
Mid-Pacific Region
South-Central California Area Office
1243 N Street
Fresno, CA 03721

SEP 25 2009

Subject: Draft Environmental Impact Statement for Madera Irrigation District
Water Supply Enhancement Project (CEQ# 20090266)

Dear Ms. Clinton:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. These comments were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA). Our detailed comments are enclosed.

We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*") due to our concerns regarding the long-term feasibility of the project given increasingly constrained Central Valley Project (CVP) supplies, and potential significant impacts to vernal pools, rare alkali rain pools, and threatened and endangered species.

EPA supports the development of water banks and conjunctive use projects consistent with ecosystem protection, integrated regional water management, and sustainable water use. We advocate the alignment of water supply demands with available developed supplies. We acknowledge the potential for the Water Supply Enhancement Project (WSEP) to contribute to the operational flexibility and water supply reliability of the CVP.

Source water for the WSEP would be water from Friant Division and Hidden Unit CVP contracts, CVP uncontrolled flows provided under temporary contract, and Madera Irrigation District's pre-1914 non-CVP water rights supply. A recent California Department of Water Resources (DWR) study of the potential impact of climate change predicts significantly reduced diversions from the San Francisco Bay and Delta over the next century. In addition, there are other projects which could utilize the same WSEP source water. Given these predicted developments, EPA believes that reduced water export scenarios and future limitations on CVP supplies should be fully evaluated in the final EIS (FEIS).

Alternative B, the Proposed Action (Preferred Action), would flood 700 acres of swales outside the regular wet season to recharge the underlying aquifer for later water supply recovery. These swales containing vernal pools, rare alkali rain pools, and associated uplands that provide important habitat for threatened and endangered species. The temporary and permanent effects of this flooding are not clearly described in the DEIS. In addition, the environmental commitment to create, restore, or preserve vernal pools does not adequately describe a mitigation plan for loss of wetlands.

Given the uncertainty of effects and lack of a detailed compensatory mitigation plan, EPA is not able to determine whether or not the Proposed Action (Preferred Alternative), as currently proposed, represents the Least Environmentally Damaging Practicable Alternative (LEDPA). We recommend that no Section 404 permit be issued without a more definitive demonstration of compliance with the Clean Water Act 404(b)(1) Guidelines. We recommend the FEIS include additional information to support the conclusion that the Proposed Action represents the LEDPA. We note that Alternative C would replace natural swale recharge with recharge basins, eliminating the potential flood-related impacts to vernal pools, alkali rain pools, and threatened and endangered species.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD ROM to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Laura Fujii, the lead reviewer for this project. Laura can be reached at (415) 972-3852 or fujii.laura@epa.gov.

Sincerely,

Kathleen M. Goforth

Kathleen M. Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosures: Summary of Rating Definitions
Detailed Comments

cc: Kathy Norton, US Army Corps of Engineers
Mark Littlefield, Watershed Planning Branch, Sacramento, USFWS
Susan Jones, San Joaquin Valley Branch, Sacramento, USFWS
W. Dale Harvey, Central Valley Region, California RWQCB
District Manager, Madera Irrigation District

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

EPA DETAILED DEIS COMMENTS ON MADERA IRRIGATION DISTRICT WATER SUPPLY ENHANCEMENT PROJECT, MADERA COUNTY, CA., SEPTEMBER 25, 2009

Water Supply Reliability

Evaluate the long-term feasibility of the project. Source water for the Water Supply Enhancement Project (WSEP) would be water from Friant Division and Hidden Unit Central Valley Project (CVP) contracts, CVP uncontrolled flows provided under temporary contract, and Madera Irrigation District's pre-1914 non-CVP water rights supply. A California Department of Water Resources (DWR) study of the potential impact of climate change on the San Francisco Bay and Delta watershed predicts significantly reduced inflow and reduced CVP diversions over the next century. Holding regulatory, structural, and operating rules constant, the DWR study estimated climate-change induced reductions in Delta exports and reservoir carryover storage ranging from 7% to 19% at mid-century, and of 21% to 38% by year 2100.¹ Furthermore, the San Joaquin River Restoration Program and proposed Temperance Flat Reservoir could utilize the same source water as proposed for the WSEP. EPA is concerned with the long-term feasibility of the project given the predicted reduction in available source water.

Recommendations:

The FEIS should fully evaluate the long-term feasibility of the project in light of increasingly constrained CVP supplies. EPA recommends that reduced water export scenarios and future limitations on CVP water supplies be fully evaluated in the final EIS (FEIS). For instance, describe and evaluate implications for the WSEP, and environmental and water supply reliability tradeoffs of competing demands (e.g., Temperance Flats Reservoir, San Joaquin River Restoration Program), for the limited developed source water supply. The FEIS should include a rigorous evaluation of the effects of climate change on the availability of source water for banking.

The FEIS should provide additional information on the WSEP source water. For instance, describe the frequency and quantity of CVP uncontrolled flows and the existing beneficial uses supported by these flows. The quantity, potential availability, and existing beneficial uses of pre-1914 non-CVP water right supplies should also be described.

Given predicted constrained source water supplies, we recommend the FEIS consider and evaluate other potential water sources, such as agricultural spills and tail-water, treated waste water, and water transfers and exchanges.

¹ See Possible Impacts of Climate Change to California's Water Supply, California Climate Center, Summary Sheet, April 2009 (Available on DWR web site at http://www.water.ca.gov/pubs/climate/climate_change_impacts_summary_sheet_april_2009/climate_change_impacts_summary_sheet_4-16-09_lowres.pdf).

Demonstrate that the project is consistent with, and a part of, an integrated regional water management strategy. Water management has become more complex given climate change and the competing interests of water supply demands, flood management, environmental protection, and the need to comply with legal and regulatory requirements. DWR has provided a framework for state and local water managers to improve their capacity to handle change and to adapt to non-climate demands such as population growth, ecosystem restoration, and flood protection.² The WSEP should be consistent with DWR recommendations and demonstrate that it is part of an integrated regional water management strategy. EPA believes nonstructural water management options that avoid and minimize adverse environmental effects, should be implemented to the maximum extent feasible prior to structural measures with potential significant adverse environmental impacts.

Recommendations:

The FEIS should show that the WSEP is consistent with, and a part of, an integrated regional water management strategy. For example, provide additional information in the FEIS demonstrating that nonstructural water management actions are being implemented to meet water supply reliability and groundwater overdraft objectives.

We recommend immediate implementation of additional efficient agricultural water management practices such as implementation of a Supervisory Control and Data Acquisition system to provide real-time adjustment of irrigation flows. These measures would aid in meeting water supply reliability objectives during the development of the WSEP.

Section 404 of the Clean Water Act

Demonstrate compliance with the Clean Water Act 404(b)(1) Guidelines. EPA is not able to determine whether or not the Proposed Action, as currently proposed, represents the Least Environmentally Damaging Practicable Alternative (LEDPA), the only alternative that can be permitted pursuant to CWA 404(b)(1) Guidelines. Of specific concern are temporary and permanent indirect and direct impacts to vernal pool and rare alkali rain pool ecosystems and threatened and endangered species as a result of flooding 700 acres of swales outside the regular wet season.

Recommendations:

We recommend that no Clean Water Act Section 404 permit be issued without a more definitive demonstration of compliance with the Clean Water Act 404(b)(1) Guidelines.

² See Managing an Uncertain Future: climate change Adaptation Strategies for California's Water, The Resources Agency, Department of Water Resources, October 2008 (Available on DWR web site at <http://www.water.ca.gov/pubs/climate>).

Include in the FEIS a separate section addressing compliance with Section 404 of the Clean Water Act and potential impacts to special aquatic sites (e.g., wetlands, open water, marshes, riparian woodlands). This section should identify Section 404 Clean Water Act requirements, underlying assumptions and conclusions, and detailed management and mitigation proposals to ensure compliance with these requirements.

The FEIS should provide information to support the conclusion that the Proposed Action (Preferred Alternative) represents the LEDPA, versus other action alternatives, such as Alternative C, which avoids the adverse effects of flooding vernal pools, alkali rain pools, threatened and endangered species habitat and the risk of type conversion of wetlands.

To comply with the Guidelines, the proposed action must meet all of the following criteria:

- There is no practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (40 CFR 230.10(a)).
- The proposed action does not violate State water quality standards, toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat (40 CFR 230.10(b)).
- The proposed action will not cause or contribute to significant degradation of waters of the United States, including wetlands (40 CFR 230.10(c)). Significant degradation includes loss of fish and wildlife habitat, including cumulative losses.
- All appropriate and practicable steps are taken to minimize adverse impacts on the aquatic ecosystem (i.e., mitigation) (40 CFR 230.10(d)). This includes incorporation of all appropriate and practicable compensation measures for unavoidable losses to waters of the United States, including wetlands. The FEIS should fully address the feasibility of "in-kind" habitat mitigation measures.

Provide a detailed wetland compensatory mitigation plan. The DEIS lists Environmental Commitment BIO-2b: Create, Restore, or Preserve Vernal Pools as mitigation for impacts to wetlands (p. 2-38). The proposed mitigation ratio is 1:1. A detailed description of the mitigation plan is not provided.

Recommendations:

The FEIS should provide a detailed wetland compensatory mitigation plan which describes mitigation location, implementation method, responsible party, funding, water sources, implementation timeframe, reporting requirements, and success criteria. We recommend the FEIS include scientific data that demonstrates the

ability to fully compensate for and create vernal pools, especially the little known and unique alkali rain pools. Given the uncertainty of successful creation of vernal pools and alkali rain pools, we recommend a mitigation ratio larger than 1:1. The FEIS should also describe other mitigation measures should creation, restoration, or preservation prove to be infeasible.

Provide a detailed evaluation of effects of the mosquito abatement program. To minimize an increase in mosquito production, Madera Irrigation District will implement an agreement with the Madera County Mosquito and Vector Control District. A specific mosquito abatement program will be developed for monitoring mosquito larvae production in the recharge basins, drainages, and distribution canals. If mosquito larvae thresholds are exceeded, suppression measure using environmental, biological, and insecticides will be used (e.g., mosquito fish, control of emergent vegetation with algaecides) (p. 2-47). While these control measures would not be directly applied to flooded swales, it is not clear whether recharge water from distribution canals could introduce mosquito fish or pesticides into sensitive wetlands.

Recommendation:

The FEIS should provide a detailed evaluation of potential adverse effects of the mosquito abatement program on flooded swales, vernal pools, alkali rain pools, and threatened, endangered, sensitive species and their habitat, and underlying aquifer. If potential adverse impacts to sensitive resources or groundwater are feasible, we recommend the FEIS include an evaluation of mitigation measures to address these effects.

Full Disclosure

The FEIS should provide additional information regarding the following items:

1. The Madera Irrigation District recharges the underlying aquifer through conveyances at 8 existing percolation facilities and as incidental recharge as a result of spills (p. 4.1-3). The FEIS should describe why expansion of these existing facilities was not carried forward as part of the WSEP.
2. A pilot project to determine use of flooded swales for recharge is briefly described in the DEIS (p. 4.18-4). The FEIS should provide the details of this pilot study in an appendix, including a description of the data collected, study methodology, and the baseline used to determine effects impacts. Of specific interest is whether the pilot project measured potential ecosystem changes caused by flooding of swales outside the regular wet season.
3. Two federally listed species, vernal pool fairy shrimp and blunt-nosed leopard lizard, are documented as occurring on Madera Ranch, the site of the WSEP. The blunt-nosed leopard lizard is also a fully protected species under the California Fish and Game Code (p. 4.5-27). In addition, Madera Ranch provides suitable grassland habitat for the federal and state listed endangered Fresno Kangaroo Rat and federal endangered San Joaquin kit fox (pps. 4.5-29 to -30). The FEIS should provide a detailed mitigation plan for potential adverse effects to these listed species.